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IFAS EXTENSION

Friday's Feature

By

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May 6, 2006

Controlling tomato diseases in the home vegetable garden

Most of us love home-grown tomatoes and delight in setting out a few plants in hopes of being rewarded with a plentiful harvest. But this year is proving to be a difficult year for tomatoes.

Growing tomatoes in Gulf Coast gardens can be challenging. Tomatoes can suffer from all kinds of diseases and pests. Unfortunately, it can be very difficult to distinguish between the diseases just on the basis of visible symptoms.

Tomatoes have many disease symptoms including wilts, leaf spots and blights. These disease symptoms are caused by different microorganisms including bacteria, fungi and viruses. Most major tomato diseases are caused by fungi. Because these are microscopic and early infection is not seen with the naked eye, control measures should begin before visual symptoms are present.

Disease control in the home vegetable garden must start long before seeds or plants are placed in the ground. Plan a long-range program and keep records from one year to the next, especially noting the location of plant types within the garden. This will facilitate effective crop rotation, which is one method of minimizing diseases caused by soilborne pathogens.

The principle behind rotation lies in the fact that some disease causing microbes affect one group of plants, but may not affect another. Rotation therefore provides a host-free period that is long enough to reduce populations of fungi, bacteria and nematodes to non-damaging levels.

Vegetables or annual flowers within the same family are often susceptible to the same diseases. For example, if tomatoes, peppers and Irish potatoes were planted in an area of the garden during this season, then switch to vegetables within another plant family for three years or more. The longer the interval between repeated plantings within the same group, in the same spot, the better.

Establish good cultural and sanitation practices. This includes proper soil preparation, fertilizing and watering, as well as early detection and removal of infected plants.

Since splashing water is the principle method of spreading fungal and bacterial foliar diseases, it is important to water plants at the ground level and early in the day. This allows the foliage to dry prior to the evening hours and reduces splashing of spores from infected tissue or soil onto the healthy tissue.

Remember to step up the volume and frequency of supplemental irrigation as plants load up with fruit. There is a sudden demand for more water as fruit enlargement occurs and if the extra soil moisture requirement is not met, then blossom end rot of the fruit can ruin the crop.

Proper spacing of plants increases air flow and will also help reduce disease severity. Control of foliar diseases during periods of frequent rainfall can be difficult even with the use of fungicides.

An equally important, but frequently overlooked, preventive method of disease control is the use of disease-resistant vegetable varieties. There are many disease-resistant varieties available to the home gardener that produces abundant, high quality fruit.

Most tomato descriptions include a code describing the amount of disease resistance contained in each variety. Look for those that are coded: VFFN when choosing varieties. The "V" stands for Verticillium wilt resistance. The "FF" means that a variety is resistant to race 1 and 2 of Fusarium wilt and the "N" reveals a certain amount of nematode resistance.

The gardener must be aware that disease can be introduced via infected seed or through the purchase of diseased plants; therefore, careful inspection of transplants is recommended. It is desirable to purchase seed and transplants from a local, reliable source.

Theresa Friday is the Residential Horticulture Extension Agent for Santa Rosa County. The use of trade names, if used in this article, is solely for the purpose of providing specific information. It is not a guarantee, warranty, or endorsement of the product name(s) and does not signify that they are approved to the exclusion of others. For additional information about all of the county extension services and other articles of interest go to: <http://www.santarosa.fl.gov/extension>